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Intellectual Property Section
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42 Number of Pages (including this page)

Date: July 5, 2005

To: Examiner Perez, A. – Group 2684

Location: United States Patent and Trademark Office

Fax No.: 703-872-9306

From: Steven A. May (Registration No. 44,912)

Subject: Serial No. 09/886,642 –Vukovic et al.

MESSAGE:

Enclosed herewith, please find a **APPEAL BRIEF UNDER 37 C.F.R. 1.192** for filing in the below-identified application. (3 copies)

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EXAMINER:	**Perez, A.**
GROUP ART UNIT:	2684
SERIAL NO.:	09/886,642
FILED:	June 21, 2001
INVENTOR:	Vukovic et al.
ATTORNEY DOCKET NO.:	CE08410R

PTO/SB/21 (09-04)

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in this Submission: 4

Application Number	09/886,642
Filing Date	June 21, 2001
First Named Inventor	Vukovic et al.
Group Art Unit	2684
Examiner Name	Perez, A.
Attorney Docket Number	CE08410R

ENCLOSURES (check all that apply)

- [X] Fee Transmittal Form
- [ ] Fee Attached
- [ ] Amendment/Reply
- [ ] After Final
- [ ] Affidavits/Declaration(s)
- [ ] Extension of time Request
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- [ ] Certified Copy of Priority Documents
- [ ] Response to Missing Parts/ Incomplete Application
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- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
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Remarks

- [ ] After Allowance Communication to Group
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- [X] Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Steven A. May	Registration No.	44,912
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TOTAL AMOUNT OF PAYMENT ($)

Complete if Known	
Application Number	09/886,642
Filing Date	June 21, 2001
First Named Inventor	Vukovic et al.
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METHOD OF PAYMENT

1. [X] The Commissioner is hereby authorized to charge indicated fees and credit any overpayment to:

Deposit Account Number: 50-2117
Deposit Account Name: Motorola, Inc.

[X] Charge Any Additional Fee required under 37 CFR 1.16 and 1.17

[ ] Applicant claims small entity status. See 37 CFR 1.27

2. [ ] Payment Enclosed:

[ ] Check [ ] Credit Card [ ] Money Order [ ] Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)		Fee Paid
1001	770	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($) 0.00

2. EXTRA CLAIM FEES

		Previously Paid**		Extra Claims		Fee from below		Fee Paid
Total Claims		- 20	=		X	18	=	
Independent Claims		- 3	=		X	86	=	
Multiple Dependent						280	=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	* Reissue independent claims over original patent
1205	18	2205	9	*Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 0.00

**OR NUMBER PREVIOUSLY PAID, IF GREATER THAN STANDARD ALLOWANCE.
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FEE CALCULATION (continued)

3. ADDITIONAL FEES

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1051	130	2051	65	Surcharge – late filing fee or oath	
1052	50	2052	25	Surcharge – late Provisional filing	
1053	130	1053	130	Non-English specification	
1812	2520	1812	2520	For filing a request for ex parte Reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1840*	1805	1840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1450	2254	725	Extension for reply within fourth month	
1255	1970	2255	986	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1510	1451	1510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive - unavoidable	
1453	1300	2453	650	Petition to revive - unintentional	
1501	1300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of IDS	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37 CFR § 1.129(b))	
1801 (RCE)	750	2801	375	Request for Continued Examination	
1802	900	1802	900	Request for expedited examination of a design application	
				Other fee (specify)	

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SUBMITTED BY

		Complete (if applicable)			
Name (Print/Type)	Steven A. May	Registration No.	44,912	Telephone	(847) 576-3635
Signature				Date	July 5, 2005

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- PATENT -

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Vukovic et al.	EXAMINER:	Perez, A.
SERIAL NO.:	09/886,642	ART UNIT:	2684
FILED:	06/21/01	CASE NO.:	CE08410R
ENTITLED:	METHOD AND APPARATUS FOR ALLOCATING A COMMUNICATION RESOURCE IN A BROADBAND COMMUNICAITON SYSTEM		

Motorola, Inc.
Corporate Offices
1303 E. Algonquin Road
Schaumburg, IL 60196
July 5, 2005

APPEAL BRIEF UNDER 37 CFR 1.192

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P.O. Box 1450
Alexandria, Va. 22313-1450

Commissioner:

The appellants hereby respectfully submit the following Appeal Brief in response to a final Office Action dated January 26, 2005, and a Notice of Appeal filed May 3, 2005.

1. REAL PARTY IN INTEREST

The real party in interest in this appeal is Motorola, Inc.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

3. STATUS OF CLAIMS

This is an appeal from a final Office Action, dated January 26, 2005. Claims 1-24 are appealed. In a first Office Action dated April 21, 2004, the Examiner rejected claims 1-21 under 35 U.S.C. §102(e) as being anticipated by Bender (U.S. patent no. 6,366,779). In an Amendment dated August 24, 2004, the appellants amended each of claims 1, 3-5, 8, 10-12, 15, and 17-19 and added new claims 22-24.

Claim 1, as amended, provides a method for allocating a communication resource that comprises a reverse link traffic channel in a broadband communication system, the method including receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated and, in response to receiving the communication resource access request, transmitting a grant of access to the reverse link traffic channel.

Claim 8, as amended, provides an apparatus for allocating a communication resource in a broadband communication system, wherein the communication resource comprises a reverse link traffic channel. The apparatus includes an access request detector that detects a receipt of a communication resource access request, a demodulator that is capable of demodulating messages received via the reverse link traffic channel, and a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

Claim 15, as amended, provides a communication device capable of operating in a broadband communication system. The communication device includes a receiver for receiving an communication resource access request, an access request detector coupled to the receiver that detects a receipt of the communication resource access request, a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel, a means for generating a grant of access to the demodulator in response to reception of the communication resource access request, and a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant, a transmitter for transmitting the modulated access grant, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

In a final Office Action dated January 26, 2005, the Examiner rejected claims 1-24 under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger (PCT International Publication No. WO 00/57663). No claims were allowed. The pending claims 1-24 are reproduced below in the attached Appendix.

4. STATUS OF AMENDMENTS

A Response to the Final Office Action was filed on April 28, 2005, and is currently pending. In the Response to the Final Office Action, the appellants responded to the Examiner's rejection of claims 1-24. The Response did not amend any claims. The appellants received an Advisory Action, dated May 23, 2005. The Advisory Action did not allow any of the claims.

5. SUMMARY OF INVENTION

The appellant's invention provides a method and apparatus for allocating a communication resource that includes a reverse link traffic channel in a broadband communication system. The communication resource that includes the reverse link traffic channel is allocated in response to a received communication resource access request, wherein the access request is received while a message received via the

communication channel is currently being demodulated. In response to receiving the request, a grant of access to the communication channel is generated and transmitted, which grant authorizes the source of the access request to use the communication channel. Thus the idle time of the base station demodulators of the prior art, wherein a preamble sent by a mobile station is not acknowledged by the base station until a demodulator is freed up to demodulate a new message, is reduced and system throughput and capacity is increased.

Claim 1, as amended, provides a method for allocating a communication resource that comprises a reverse link traffic channel in a broadband communication system. The method includes steps of receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated and, in response to receiving the communication resource access request, transmitting a grant of access to the reverse link traffic channel. (FIGs. 4 and 5; page 4, lines 22-27; page 7, line 1 to page 9, line 17; page 9, line 18 to page 12, line 7)

Claim 8, as amended, provides an apparatus for allocating a communication resource that includes a reverse link traffic channel in a broadband communication system. The apparatus includes an access request detector that detects a receipt of a communication resource access request, a demodulator that is capable of demodulating messages received via the reverse link traffic channel, and a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel. (FIGs. 3 and 4; page 5, lines 1-10; page 7, line 1 to page 9, line 17; page 9, line 18 to page 11, line 9)

Claim 15, as amended, provides a communication device that is capable of operating in a broadband communication system. The communication device includes a receiver for receiving an communication resource access request, an access request detector coupled to the receiver that detects a receipt of the communication resource access request, a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel, a means for generating a grant of

access to the demodulator in response to reception of the communication resource access request, and a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant, a transmitter for transmitting the modulated access grant, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel. (FIGs. 3 and 4; page 5, lines 11-23; page 7, line 1 to page 9, line 17; page 9, line 18 to page 11, line 9)

6. ISSUES

Whether claims 1, 8, and 15 are unpatentable under 35 U.S.C. §103(a) over Bender in view of Willeneger.

7. GROUPING OF CLAIMS

Appellants designate the following group of claims:
Group I: claims 1-24.

8. ARGUMENT

(i) Rejection under 35 U.S.C. §112, first paragraph:

None

(ii) Rejection under 35 U.S.C. §112, second paragraph:

None

(iii) Rejection under 35 U.S.C. §102:

None

(iv) Rejection under 35 U.S.C. §103:

The Examiner rejected claim 1-21 under 35 U.S.C. §103(a) under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger. More specifically, with

respect to claims 1, 8, and 15, the Examiner contended that Bender teaches a method, apparatus, and device for allocating a communication resource comprising a reverse link channel (col. 4, lines 14-18), the method comprising receiving a communication resource access request at time that data received via the reverse link channel is currently being demodulated (col. 10, lines 3-16; the Examiner noting that this step is not actually taught but it is inherent that demodulation is occurring when the channel is being used by the mobile station (MS) while the base station (BS) is receiving an access probe) and, in response to receiving the communication resource access request, transmitting a grant of access to the reverse link channel (col. 10, lines 28-33). The Examiner further stated that Bender does not teach a reverse link traffic channel request in detail, but that Willeneger teaches a reverse link traffic channel being demodulated while receiving a reverse link traffic channel request and a grant of access to a reverse link traffic channel (page 11, lines 22-24; page 12, lines 17-22).

The appellants believe that the Examiner has misinterpreted both Bender and Willeneger. In col. 4, lines 14-18, Bender merely teaches an MS initiating a reverse link traffic channel assignment request by transmitting an access probe to a BS via a reverse link access channel. In col. 10, lines 3-16, Bender merely teaches that, after transmitting its probe, the MS may begin transmitting on a reverse link traffic channel identified the MS's Mobile Station Identifier (MSI) without first waiting for a traffic channel assignment. This reverse link traffic channel is defined by the MS's MSI. Since the MSI is unique to the MS, Bender assumes that the corresponding reverse link traffic channel will be uniquely allocated to the MS and therefore there is very little likelihood that any other MS will be using this reverse link traffic channel and cause a collision. In other words, Bender teaches a "pre-assignment" of a reverse link traffic channel uniquely to the MS (col. 4, lines 56-61). This has nothing to do with an assignment of the reverse link traffic channel by the BS in response to an access probe. That is, claims 1, 8, and 15 teach an expedited assignment of a reverse link traffic channel. By contrast, Bender teaches a pre-assignment of a reverse link traffic channel. These are two completely different approaches to call set up.

Willeneger is concerned with accessing an access channel and with providing power control via the access channel. That is, Willeneger teaches a splitting of an access probe into two parts, a request portion and a message portion. An MS seeking access to a communication system first transmits the request portion of the access probe, that is, an abbreviated and incomplete version of an access probe, via a reverse link control channel (R-CCCH). Power control, a typical access probe function that is performed prior to traffic channel assingnment, may not be performed based on the request portion of the access probe. In the first section of Willeneger cited by the Examiner (page 11, lines 22-24), in response to transmitting the request, the MS monitors a forward link control channel to determine if the MS is granted a reserved *access channel* for conveyance of the message portion of the access probe. That is, the referenced channel assignment message assigns an access channel, not a traffic channel. In fact, Willeneger specifically states that "[o]nce the mobile station is assigned a reserved access channel, the traffic channel assignment process can proceed in much the same manner as IS-95," that is, in a conventional manner. When the MS is granted a reserved access channel, the MS may then transmit the message portion of the access probe and engage in power control via preambles transmitted via the reserved access channel. In the other, second section of Willeneger cited by the Examiner (page 12, lines 17-22), Willeneger merely teaches that, after the BS grants an access channel to the MS and receives the message portion of the access probe, the BS demodulates the message portion.

In other words, Willeneger merely concerns an MS attempting to access an access channel so that the MS may then engage in power control via preambles transmitted via the access channel. Willeneger then assumes conventional traffic channel assignment. By contrast, claims 1, 8, and 15 assume that the MS can access the access channel and transmit a preamble and instead teach an expedited process for reverse link traffic channel assignment. Nowhere is this taught by, or even a concern of, Willeneger.

Therefore, neither Bender nor Willeneger, individually or in combination, teach the features of claims 1, 8, or 15 of receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated and, in response to receiving the communication resource access request,

transmitting a grant of access to the reverse link traffic channel. Again, in Bender, the reverse link traffic channel is freed up as it has been uniquely pre-assigned to the MS. Willeneger merely teaches conventional reverse link traffic channel assignment. Accordingly, the appellants respectfully request that claims 1, 8, and 15 are not unpatentable over the prior art of record.

Regarding dependent claims 2-7, 9-14, and 16-24, because claims 2-7 and 22 depend directly or indirectly from independent claim 1, claims 9-14 and 23 depend directly or indirectly from independent claim 8, and claims 16-21 and 24 depend directly or indirectly from independent claim 15, the appellants respectfully request that claims 2-7, 9-14, and 16-24 are not unpatentable over the prior art of record.

(v) Other rejections

None.

8. CONCLUSION

For the above reasons, the appellants respectfully submit that the rejection of claims 1-24 under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger is in error and should be reversed and the claims allowed.

Respectfully submitted,
Ivan Vukovic et al.

By: _____

Steven A. May
Attorney for Appellants
Registration No. 44,912
Tel. No.: 847/576-3635
Fax No.: 847/576-3750

APPENDIX

1. In a broadband communication system, a method for allocating a communication resource that comprises a reverse link traffic channel, the method comprising steps of:

receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated; and

in response to receiving the communication resource access request, transmitting a grant of access to the reverse link traffic channel.

2. The method of claim 1, wherein the access grant is transmitted prior to completion of the demodulation of the data.

3. The method of claim 1, wherein the step of transmitting a grant of access to the reverse link traffic channel comprises steps of:

determining a time that a demodulator will be available;

determining a time that a grant of access to the reverse link traffic channel can be transmitted based on the time that the demodulator will be available; and

transmitting an access grant based on the received request and on the determined time that the grant of access to the reverse link traffic channel can be transmitted.

4. The method of claim 3, wherein the step of transmitting a grant of access to the reverse link traffic channel further comprises a step of determining a time that the demodulator will finish demodulating the received message.

5. The method of claim 3, wherein the step of transmitting a grant of access to the reverse link traffic channel further comprises a step of determining a time interval between the time that the demodulator will be available and the time that an access grant can be transmitted.

6. The method of claim 1, wherein the communication resource access request is a preamble.

7. The method of claim 1, wherein the access grant is an acknowledgment.

8. An apparatus for allocating a communication resource in a broadband communication system, wherein the communication resource comprises a reverse link traffic channel, the apparatus comprising:

an access request detector that detects a receipt of a communication resource access request;

a demodulator that is capable of demodulating messages received via the reverse link traffic channel;

a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request; and

wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

9. The apparatus of claim 8, wherein the access grant is generated prior to completion of demodulation of the message.

10. The apparatus of claim 8, wherein the a means for generating a grant of access to the reverse link traffic channel comprises:

a means for determining a time that the demodulator will be available;

a means for determining a time of transmission of a grant of access to the reverse link traffic channel based on the determined time of demodulator availability; and

a means for generating an access grant based on the received communication resource access request and on the determined time of transmission of the access grant.

11. The apparatus of claim 10, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time that the demodulator will finish demodulating the received message.

12. The apparatus of claim 10, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time interval between the time that the demodulator will be available and the time that an access grant may be transmitted.

13. The apparatus of claim 8, wherein the access grant comprises an acknowledgment.

14. The apparatus of claim 8, wherein the communication resource access request comprises a preamble and wherein the access request detector comprises a preamble detector that detects a preamble in a received signal.

15. A communication device capable of operating in a broadband communication system, the communication device comprising:

a receiver for receiving an communication resource access request;

an access request detector coupled to the receiver that detects a receipt of the communication resource access request;

a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel;

a means for generating a grant of access to the demodulator in response to reception of the communication resource access request;

a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant;

a transmitter for transmitting the modulated access grant; and

wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

16. The communication device of claim 15, wherein the access grant is generated when the demodulator is engaged in a demodulation of an already received message.

17. The communication device of claim 15, wherein the a means for generating a grant of access to the reverse link traffic channel comprises:

a means for determining a time that the demodulator will be available;

a means for determining a time of transmission of a grant of access to the reverse link traffic channel based on the determined time of demodulator availability; and

a means for generating an access grant based on the received communication resource access request and on the determined time of transmission of the access grant.

18. The communication device of claim 17, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time that the demodulator will finish demodulating the received message.

19. The communication device of claim 17, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time interval between the time that the demodulator will be available and the time that an access grant may be transmitted.

20. The communication device of claim 15, wherein the communication resource access request comprises a preamble and wherein the access request detector comprises a preamble detector capable of detecting the preamble.

21. The communication device of claim 15, wherein the access grant comprises an acknowledgment.

22. The method of claim 1, further comprising a step of determining an earliest time that a grant of access to the reverse link traffic channel can be conveyed to a mobile station and wherein transmitting comprises transmitting the grant of access to the mobile station at or after the determined earliest time.

23. The apparatus of claim 8, wherein the means for generating a grant of access to the communication channel comprises a means for determining an earliest time that a grant of

access to the reverse link traffic channel can be conveyed to a mobile station and wherein the apparatus further comprises a means for conveying the grant of access to the mobile station at or after the determined earliest time.

24. The communication device of claim 15, wherein the means for generating a grant of access to the communication channel comprises a means for determining an earliest time that a grant of access to the reverse link traffic channel can be conveyed to a mobile station and wherein the apparatus further comprises a means for conveying the grant of access to the mobile station at or after the determined earliest time.

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Alexandria, Va. 22313-1450

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Claim 8, as amended, provides an apparatus for allocating a communication resource in a broadband communication system, wherein the communication resource comprises a reverse link traffic channel. The apparatus includes an access request detector that detects a receipt of a communication resource access request, a demodulator that is capable of demodulating messages received via the reverse link traffic channel, and a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

Claim 15, as amended, provides a communication device capable of operating in a broadband communication system. The communication device includes a receiver for receiving an communication resource access request, an access request detector coupled to the receiver that detects a receipt of the communication resource access request, a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel, a means for generating a grant of access to the demodulator in response to reception of the communication resource access request, and a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant, a transmitter for transmitting the modulated access grant, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

In a final Office Action dated January 26, 2005, the Examiner rejected claims 1-24 under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger (PCT International Publication No. WO 00/57663). No claims were allowed. The pending claims 1-24 are reproduced below in the attached Appendix.

4. STATUS OF AMENDMENTS

A Response to the Final Office Action was filed on April 28, 2005, and is currently pending. In the Response to the Final Office Action, the appellants responded to the Examiner's rejection of claims 1-24. The Response did not amend any claims. The appellants received an Advisory Action, dated May 23, 2005. The Advisory Action did not allow any of the claims.

5. SUMMARY OF INVENTION

The appellant's invention provides a method and apparatus for allocating a communication resource that includes a reverse link traffic channel in a broadband communication system. The communication resource that includes the reverse link traffic channel is allocated in response to a received communication resource access request, wherein the access request is received while a message received via the

communication channel is currently being demodulated. In response to receiving the request, a grant of access to the communication channel is generated and transmitted, which grant authorizes the source of the access request to use the communication channel. Thus the idle time of the base station demodulators of the prior art, wherein a preamble sent by a mobile station is not acknowledged by the base station until a demodulator is freed up to demodulate a new message, is reduced and system throughput and capacity is increased.

Claim 1, as amended, provides a method for allocating a communication resource that comprises a reverse link traffic channel in a broadband communication system. The method includes steps of receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated and, in response to receiving the communication resource access request, transmitting a grant of access to the reverse link traffic channel. (FIGs. 4 and 5; page 4, lines 22-27; page 7, line 1 to page 9, line 17; page 9, line 18 to page 12, line 7)

Claim 8, as amended, provides an apparatus for allocating a communication resource that includes a reverse link traffic channel in a broadband communication system. The apparatus includes an access request detector that detects a receipt of a communication resource access request, a demodulator that is capable of demodulating messages received via the reverse link traffic channel, and a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel. (FIGs. 3 and 4; page 5, lines 1-10; page 7, line 1 to page 9, line 17; page 9, line 18 to page 11, line 9)

Claim 15, as amended, provides a communication device that is capable of operating in a broadband communication system. The communication device includes a receiver for receiving an communication resource access request, an access request detector coupled to the receiver that detects a receipt of the communication resource access request, a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel, a means for generating a grant of

access to the demodulator in response to reception of the communication resource access request, and a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant, a transmitter for transmitting the modulated access grant, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel. (FIGs. 3 and 4; page 5, lines 11-23; page 7, line 1 to page 9, line 17; page 9, line 18 to page 11, line 9)

6. ISSUES

Whether claims 1, 8, and 15 are unpatentable under 35 U.S.C. §103(a) over Bender in view of Willeneger.

7. GROUPING OF CLAIMS

Appellants designate the following group of claims:
Group I: claims 1-24.

8. ARGUMENT

(i) Rejection under 35 U.S.C. §112, first paragraph:

None

(ii) Rejection under 35 U.S.C. §112, second paragraph:

None

(iii) Rejection under 35 U.S.C. §102:

None

(iv) Rejection under 35 U.S.C. §103:

The Examiner rejected claim 1-21 under 35 U.S.C. §103(a) under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger. More specifically, with

respect to claims 1, 8, and 15, the Examiner contended that Bender teaches a method, apparatus, and device for allocating a communication resource comprising a reverse link channel (col. 4, lines 14-18), the method comprising receiving a communication resource access request at time that data received via the reverse link channel is currently being demodulated (col. 10, lines 3-16; the Examiner noting that this step is not actually taught but it is inherent that demodulation is occurring when the channel is being used by the mobile station (MS) while the base station (BS) is receiving an access probe) and, in response to receiving the communication resource access request, transmitting a grant of access to the reverse link channel (col. 10, lines 28-33). The Examiner further stated that Bender does not teach a reverse link traffic channel request in detail, but that Willeneger teaches a reverse link traffic channel being demodulated while receiving a reverse link traffic channel request and a grant of access to a reverse link traffic channel (page 11, lines 22-24; page 12, lines 17-22).

The appellants believe that the Examiner has misinterpreted both Bender and Willeneger. In col. 4, lines 14-18, Bender merely teaches an MS initiating a reverse link traffic channel assignment request by transmitting an access probe to a BS via a reverse link access channel. In col. 10, lines 3-16, Bender merely teaches that, after transmitting its probe, the MS may begin transmitting on a reverse link traffic channel identified the MS's Mobile Station Identifier (MSI) without first waiting for a traffic channel assignment. This reverse link traffic channel is defined by the MS's MSI. Since the MSI is unique to the MS, Bender assumes that the corresponding reverse link traffic channel will be uniquely allocated to the MS and therefore there is very little likelihood that any other MS will be using this reverse link traffic channel and cause a collision. In other words, Bender teaches a "pre-assignment" of a reverse link traffic channel uniquely to the MS (col. 4, lines 56-61). This has nothing to do with an assignment of the reverse link traffic channel by the BS in response to an access probe. That is, claims 1, 8, and 15 teach an expedited assignment of a reverse link traffic channel. By contrast, Bender teaches a pre-assignment of a reverse link traffic channel. These are two completely different approaches to call set up.

Willeneger is concerned with accessing an access channel and with providing power control via the access channel. That is, Willeneger teaches a splitting of an access probe into two parts, a request portion and a message portion. An MS seeking access to a communication system first transmits the request portion of the access probe, that is, an abbreviated and incomplete version of an access probe, via a reverse link control channel (R-CCCH). Power control, a typical access probe function that is performed prior to traffic channel assingnment, may not be performed based on the request portion of the access probe. In the first section of Willeneger cited by the Examiner (page 11, lines 22-24), in response to transmitting the request, the MS monitors a forward link control channel to determine if the MS is granted a reserved *access channel* for conveyance of the message portion of the access probe. That is, the referenced channel assignment message assigns an access channel, not a traffic channel. In fact, Willeneger specifically states that "[o]nce the mobile station is assigned a reserved access channel, the traffic channel assignment process can proceed in much the same manner as IS-95," that is, in a conventional manner. When the MS is granted a reserved access channel, the MS may then transmit the message portion of the access probe and engage in power control via preambles transmitted via the reserved access channel. In the other, second section of Willeneger cited by the Examiner (page 12, lines 17-22), Willeneger merely teaches that, after the BS grants an access channel to the MS and receives the message portion of the access probe, the BS demodulates the message portion.

In other words, Willeneger merely concerns an MS attempting to access an access channel so that the MS may then engage in power control via preambles transmitted via the access channel. Willeneger then assumes conventional traffic channel assignment. By contrast, claims 1, 8, and 15 assume that the MS can access the access channel and transmit a preamble and instead teach an expedited process for reverse link traffic channel assignment. Nowhere is this taught by, or even a concern of, Willeneger.

Therefore, neither Bender nor Willeneger, individually or in combination, teach the features of claims 1, 8, or 15 of receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated and, in response to receiving the communication resource access request,

transmitting a grant of access to the reverse link traffic channel. Again, in Bender, the reverse link traffic channel is freed up as it has been uniquely pre-assigned to the MS. Willeneger merely teaches conventional reverse link traffic channel assignment. Accordingly, the appellants respectfully request that claims 1, 8, and 15 are not unpatentable over the prior art of record.

Regarding dependent claims 2-7, 9-14, and 16-24, because claims 2-7 and 22 depend directly or indirectly from independent claim 1, claims 9-14 and 23 depend directly or indirectly from independent claim 8, and claims 16-21 and 24 depend directly or indirectly from independent claim 15, the appellants respectfully request that claims 2-7, 9-14, and 16-24 are not unpatentable over the prior art of record.

(v) Other rejections

None.

8. CONCLUSION

For the above reasons, the appellants respectfully submit that the rejection of claims 1-24 under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger is in error and should be reversed and the claims allowed.

Respectfully submitted,
Ivan Vukovic et al.

By: _____

Steven A. May
Attorney for Appellants
Registration No. 44,912
Tel. No.: 847/576-3635
Fax No.: 847/576-3750

APPENDIX

1. In a broadband communication system, a method for allocating a communication resource that comprises a reverse link traffic channel, the method comprising steps of:

receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated; and

in response to receiving the communication resource access request, transmitting a grant of access to the reverse link traffic channel.

2. The method of claim 1, wherein the access grant is transmitted prior to completion of the demodulation of the data.

3. The method of claim 1, wherein the step of transmitting a grant of access to the reverse link traffic channel comprises steps of:

determining a time that a demodulator will be available;

determining a time that a grant of access to the reverse link traffic channel can be transmitted based on the time that the demodulator will be available; and

transmitting an access grant based on the received request and on the determined time that the grant of access to the reverse link traffic channel can be transmitted.

4. The method of claim 3, wherein the step of transmitting a grant of access to the reverse link traffic channel further comprises a step of determining a time that the demodulator will finish demodulating the received message.

5. The method of claim 3, wherein the step of transmitting a grant of access to the reverse link traffic channel further comprises a step of determining a time interval between the time that the demodulator will be available and the time that an access grant can be transmitted.

6. The method of claim 1, wherein the communication resource access request is a preamble.

7. The method of claim 1, wherein the access grant is an acknowledgment.

8. An apparatus for allocating a communication resource in a broadband communication system, wherein the communication resource comprises a reverse link traffic channel, the apparatus comprising:

an access request detector that detects a receipt of a communication resource access request;

a demodulator that is capable of demodulating messages received via the reverse link traffic channel;

a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request; and

wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

9. The apparatus of claim 8, wherein the access grant is generated prior to completion of demodulation of the message.

10. The apparatus of claim 8, wherein the a means for generating a grant of access to the reverse link traffic channel comprises:

a means for determining a time that the demodulator will be available;

a means for determining a time of transmission of a grant of access to the reverse link traffic channel based on the determined time of demodulator availability; and

a means for generating an access grant based on the received communication resource access request and on the determined time of transmission of the access grant.

11. The apparatus of claim 10, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time that the demodulator will finish demodulating the received message.

12. The apparatus of claim 10, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time interval between the time that the demodulator will be available and the time that an access grant may be transmitted.

13. The apparatus of claim 8, wherein the access grant comprises an acknowledgment.

14. The apparatus of claim 8, wherein the communication resource access request comprises a preamble and wherein the access request detector comprises a preamble detector that detects a preamble in a received signal.

15. A communication device capable of operating in a broadband communication system, the communication device comprising:

a receiver for receiving an communication resource access request;

an access request detector coupled to the receiver that detects a receipt of the communication resource access request;

a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel;

a means for generating a grant of access to the demodulator in response to reception of the communication resource access request;

a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant;

a transmitter for transmitting the modulated access grant; and

wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

16. The communication device of claim 15, wherein the access grant is generated when the demodulator is engaged in a demodulation of an already received message.

17. The communication device of claim 15, wherein the a means for generating a grant of access to the reverse link traffic channel comprises:

a means for determining a time that the demodulator will be available;

a means for determining a time of transmission of a grant of access to the reverse link traffic channel based on the determined time of demodulator availability; and

a means for generating an access grant based on the received communication resource access request and on the determined time of transmission of the access grant.

18. The communication device of claim 17, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time that the demodulator will finish demodulating the received message.

19. The communication device of claim 17, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time interval between the time that the demodulator will be available and the time that an access grant may be transmitted.

20. The communication device of claim 15, wherein the communication resource access request comprises a preamble and wherein the access request detector comprises a preamble detector capable of detecting the preamble.

21. The communication device of claim 15, wherein the access grant comprises an acknowledgment.

22. The method of claim 1, further comprising a step of determining an earliest time that a grant of access to the reverse link traffic channel can be conveyed to a mobile station and wherein transmitting comprises transmitting the grant of access to the mobile station at or after the determined earliest time.

23. The apparatus of claim 8, wherein the means for generating a grant of access to the communication channel comprises a means for determining an earliest time that a grant of

access to the reverse link traffic channel can be conveyed to a mobile station and wherein the apparatus further comprises a means for conveying the grant of access to the mobile station at or after the determined earliest time.

24. The communication device of claim 15, wherein the means for generating a grant of access to the communication channel comprises a means for determining an earliest time that a grant of access to the reverse link traffic channel can be conveyed to a mobile station and wherein the apparatus further comprises a means for conveying the grant of access to the mobile station at or after the determined earliest time.

- PATENT -

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT:	Vukovic et al.	EXAMINER:	Perez, A.
SERIAL NO.:	09/886,642	ART UNIT:	2684
FILED:	06/21/01	CASE NO.:	CE08410R
ENTITLED:	METHOD AND APPARATUS FOR ALLOCATING A COMMUNICATION RESOURCE IN A BROADBAND COMMUNICAITON SYSTEM		

Motorola, Inc.
Corporate Offices
1303 E. Algonquin Road
Schaumburg, IL 60196
July 5, 2005

APPEAL BRIEF UNDER 37 CFR 1.192

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on July 5, 2005

Motorola, Inc. 7/15/2005

Name of applicant, assignee, or Registered Representative — Date

Signature

Mail Stop Appeal Brief - Patents
Commissioner of Patents
P.O. Box 1450
Alexandria, Va. 22313-1450

Commissioner:

The appellants hereby respectfully submit the following Appeal Brief in response to a final Office Action dated January 26, 2005, and a Notice of Appeal filed May 3, 2005.

1. REAL PARTY IN INTEREST

The real party in interest in this appeal is Motorola, Inc.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in this appeal.

3. STATUS OF CLAIMS

This is an appeal from a final Office Action, dated January 26, 2005. Claims 1-24 are appealed. In a first Office Action dated April 21, 2004, the Examiner rejected claims 1-21 under 35 U.S.C. §102(e) as being anticipated by Bender (U.S. patent no. 6,366,779). In an Amendment dated August 24, 2004, the appellants amended each of claims 1, 3-5, 8, 10-12, 15, and 17-19 and added new claims 22-24.

Claim 1, as amended, provides a method for allocating a communication resource that comprises a reverse link traffic channel in a broadband communication system, the method including receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated and, in response to receiving the communication resource access request, transmitting a grant of access to the reverse link traffic channel.

Claim 8, as amended, provides an apparatus for allocating a communication resource in a broadband communication system, wherein the communication resource comprises a reverse link traffic channel. The apparatus includes an access request detector that detects a receipt of a communication resource access request, a demodulator that is capable of demodulating messages received via the reverse link traffic channel, and a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

Claim 15, as amended, provides a communication device capable of operating in a broadband communication system. The communication device includes a receiver for receiving an communication resource access request, an access request detector coupled to the receiver that detects a receipt of the communication resource access request, a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel, a means for generating a grant of access to the demodulator in response to reception of the communication resource access request, and a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant, a transmitter for transmitting the modulated access grant, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

In a final Office Action dated January 26, 2005, the Examiner rejected claims 1-24 under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger (PCT International Publication No. WO 00/57663). No claims were allowed. The pending claims 1-24 are reproduced below in the attached Appendix.

4. STATUS OF AMENDMENTS

A Response to the Final Office Action was filed on April 28, 2005, and is currently pending. In the Response to the Final Office Action, the appellants responded to the Examiner's rejection of claims 1-24. The Response did not amend any claims. The appellants received an Advisory Action, dated May 23, 2005. The Advisory Action did not allow any of the claims.

5. SUMMARY OF INVENTION

The appellant's invention provides a method and apparatus for allocating a communication resource that includes a reverse link traffic channel in a broadband communication system. The communication resource that includes the reverse link traffic channel is allocated in response to a received communication resource access request, wherein the access request is received while a message received via the

communication channel is currently being demodulated. In response to receiving the request, a grant of access to the communication channel is generated and transmitted, which grant authorizes the source of the access request to use the communication channel. Thus the idle time of the base station demodulators of the prior art, wherein a preamble sent by a mobile station is not acknowledged by the base station until a demodulator is freed up to demodulate a new message, is reduced and system throughput and capacity is increased.

Claim 1, as amended, provides a method for allocating a communication resource that comprises a reverse link traffic channel in a broadband communication system. The method includes steps of receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated and, in response to receiving the communication resource access request, transmitting a grant of access to the reverse link traffic channel. (FIGs. 4 and 5; page 4, lines 22-27; page 7, line 1 to page 9, line 17; page 9, line 18 to page 12, line 7)

Claim 8, as amended, provides an apparatus for allocating a communication resource that includes a reverse link traffic channel in a broadband communication system. The apparatus includes an access request detector that detects a receipt of a communication resource access request, a demodulator that is capable of demodulating messages received via the reverse link traffic channel, and a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel. (FIGs. 3 and 4; page 5, lines 1-10; page 7, line 1 to page 9, line 17; page 9, line 18 to page 11, line 9)

Claim 15, as amended, provides a communication device that is capable of operating in a broadband communication system. The communication device includes a receiver for receiving an communication resource access request, an access request detector coupled to the receiver that detects a receipt of the communication resource access request, a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel, a means for generating a grant of

access to the demodulator in response to reception of the communication resource access request, and a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant, a transmitter for transmitting the modulated access grant, wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel. (FIGs. 3 and 4; page 5, lines 11-23; page 7, line 1 to page 9, line 17; page 9, line 18 to page 11, line 9)

6. ISSUES

Whether claims 1, 8, and 15 are unpatentable under 35 U.S.C. §103(a) over Bender in view of Willeneger.

7. GROUPING OF CLAIMS

Appellants designate the following group of claims:
Group I: claims 1-24.

8. ARGUMENT

(i) Rejection under 35 U.S.C. §112, first paragraph:

None

(ii) Rejection under 35 U.S.C. §112, second paragraph:

None

(iii) Rejection under 35 U.S.C. §102:

None

(iv) Rejection under 35 U.S.C. §103:

The Examiner rejected claim 1-21 under 35 U.S.C. §103(a) under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger. More specifically, with

respect to claims 1, 8, and 15, the Examiner contended that Bender teaches a method, apparatus, and device for allocating a communication resource comprising a reverse link channel (col. 4, lines 14-18), the method comprising receiving a communication resource access request at time that data received via the reverse link channel is currently being demodulated (col. 10, lines 3-16; the Examiner noting that this step is not actually taught but it is inherent that demodulation is occurring when the channel is being used by the mobile station (MS) while the base station (BS) is receiving an access probe) and, in response to receiving the communication resource access request, transmitting a grant of access to the reverse link channel (col. 10, lines 28-33). The Examiner further stated that Bender does not teach a reverse link traffic channel request in detail, but that Willeneger teaches a reverse link traffic channel being demodulated while receiving a reverse link traffic channel request and a grant of access to a reverse link traffic channel (page 11, lines 22-24; page 12, lines 17-22).

The appellants believe that the Examiner has misinterpreted both Bender and Willeneger. In col. 4, lines 14-18, Bender merely teaches an MS initiating a reverse link traffic channel assignment request by transmitting an access probe to a BS via a reverse link access channel. In col. 10, lines 3-16, Bender merely teaches that, after transmitting its probe, the MS may begin transmitting on a reverse link traffic channel identified the MS's Mobile Station Identifier (MSI) without first waiting for a traffic channel assignment. This reverse link traffic channel is defined by the MS's MSI. Since the MSI is unique to the MS, Bender assumes that the corresponding reverse link traffic channel will be uniquely allocated to the MS and therefore there is very little likelihood that any other MS will be using this reverse link traffic channel and cause a collision. In other words, Bender teaches a "pre-assignment" of a reverse link traffic channel uniquely to the MS (col. 4, lines 56-61). This has nothing to do with an assignment of the reverse link traffic channel by the BS in response to an access probe. That is, claims 1, 8, and 15 teach an expedited assignment of a reverse link traffic channel. By contrast, Bender teaches a pre-assignment of a reverse link traffic channel. These are two completely different approaches to call set up.

Willeneger is concerned with accessing an access channel and with providing power control via the access channel. That is, Willeneger teaches a splitting of an access probe into two parts, a request portion and a message portion. An MS seeking access to a communication system first transmits the request portion of the access probe, that is, an abbreviated and incomplete version of an access probe, via a reverse link control channel (R-CCCH). Power control, a typical access probe function that is performed prior to traffic channel assingnment, may not be performed based on the request portion of the access probe. In the first section of Willeneger cited by the Examiner (page 11, lines 22-24), in response to transmitting the request, the MS monitors a forward link control channel to determine if the MS is granted a reserved *access channel* for conveyance of the message portion of the access probe. That is, the referenced channel assignment message assigns an access channel, not a traffic channel. In fact, Willeneger specifically states that "[o]nce the mobile station is assigned a reserved access channel, the traffic channel assignment process can proceed in much the same manner as IS-95," that is, in a conventional manner. When the MS is granted a reserved access channel, the MS may then transmit the message portion of the access probe and engage in power control via preambles transmitted via the reserved access channel. In the other, second section of Willeneger cited by the Examiner (page 12, lines 17-22), Willeneger merely teaches that, after the BS grants an access channel to the MS and receives the message portion of the access probe, the BS demodulates the message portion.

In other words, Willeneger merely concerns an MS attempting to access an access channel so that the MS may then engage in power control via preambles transmitted via the access channel. Willeneger then assumes conventional traffic channel assignment. By contrast, claims 1, 8, and 15 assume that the MS can access the access channel and transmit a preamble and instead teach an expedited process for reverse link traffic channel assignment. Nowhere is this taught by, or even a concern of, Willeneger.

Therefore, neither Bender nor Willeneger, individually or in combination, teach the features of claims 1, 8, or 15 of receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated and, in response to receiving the communication resource access request,

transmitting a grant of access to the reverse link traffic channel. Again, in Bender, the reverse link traffic channel is freed up as it has been uniquely pre-assigned to the MS. Willeneger merely teaches conventional reverse link traffic channel assignment. Accordingly, the appellants respectfully request that claims 1, 8, and 15 are not unpatentable over the prior art of record.

Regarding dependent claims 2-7, 9-14, and 16-24, because claims 2-7 and 22 depend directly or indirectly from independent claim 1, claims 9-14 and 23 depend directly or indirectly from independent claim 8, and claims 16-21 and 24 depend directly or indirectly from independent claim 15, the appellants respectfully request that claims 2-7, 9-14, and 16-24 are not unpatentable over the prior art of record.

(v) Other rejections

None.

8. CONCLUSION

For the above reasons, the appellants respectfully submit that the rejection of claims 1-24 under 35 U.S.C. §103(a) as being upatentable over Bender in view of Willeneger is in error and should be reversed and the claims allowed.

Respectfully submitted,
Ivan Vukovic et al.

By: _____

Steven A. May
Attorney for Appellants
Registration No. 44,912
Tel. No.: 847/576-3635
Fax No.: 847/576-3750

APPENDIX

1. In a broadband communication system, a method for allocating a communication resource that comprises a reverse link traffic channel, the method comprising steps of:

receiving a communication resource access request at a time that data received via the reverse link traffic channel is currently being demodulated; and

in response to receiving the communication resource access request, transmitting a grant of access to the reverse link traffic channel.

2. The method of claim 1, wherein the access grant is transmitted prior to completion of the demodulation of the data.

3. The method of claim 1, wherein the step of transmitting a grant of access to the reverse link traffic channel comprises steps of:

determining a time that a demodulator will be available;

determining a time that a grant of access to the reverse link traffic channel can be transmitted based on the time that the demodulator will be available; and

transmitting an access grant based on the received request and on the determined time that the grant of access to the reverse link traffic channel can be transmitted.

4. The method of claim 3, wherein the step of transmitting a grant of access to the reverse link traffic channel further comprises a step of determining a time that the demodulator will finish demodulating the received message.

5. The method of claim 3, wherein the step of transmitting a grant of access to the reverse link traffic channel further comprises a step of determining a time interval between the time that the demodulator will be available and the time that an access grant can be transmitted.

6. The method of claim 1, wherein the communication resource access request is a preamble.

7. The method of claim 1, wherein the access grant is an acknowledgment.

8. An apparatus for allocating a communication resource in a broadband communication system, wherein the communication resource comprises a reverse link traffic channel, the apparatus comprising:

an access request detector that detects a receipt of a communication resource access request;

a demodulator that is capable of demodulating messages received via the reverse link traffic channel;

a means for generating a grant of access to the reverse link traffic channel and the demodulator in response to reception of the communication resource access request; and

wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

9. The apparatus of claim 8, wherein the access grant is generated prior to completion of demodulation of the message.

10. The apparatus of claim 8, wherein the a means for generating a grant of access to the reverse link traffic channel comprises:

a means for determining a time that the demodulator will be available;

a means for determining a time of transmission of a grant of access to the reverse link traffic channel based on the determined time of demodulator availability; and

a means for generating an access grant based on the received communication resource access request and on the determined time of transmission of the access grant.

11. The apparatus of claim 10, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time that the demodulator will finish demodulating the received message.

12. The apparatus of claim 10, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time interval between the time that the demodulator will be available and the time that an access grant may be transmitted.

13. The apparatus of claim 8, wherein the access grant comprises an acknowledgment.

14. The apparatus of claim 8, wherein the communication resource access request comprises a preamble and wherein the access request detector comprises a preamble detector that detects a preamble in a received signal.

15. A communication device capable of operating in a broadband communication system, the communication device comprising:

a receiver for receiving an communication resource access request;

an access request detector coupled to the receiver that detects a receipt of the communication resource access request;

a demodulator coupled to the receiver that is capable of demodulating messages received via a reverse link traffic channel;

a means for generating a grant of access to the demodulator in response to reception of the communication resource access request;

a modulator for modulating the access grant onto a radio frequency signal to produce a modulated access grant;

a transmitter for transmitting the modulated access grant; and

wherein the communication resource access request is received at a time that the demodulator is engaged in a demodulation of a message received via the reverse link traffic channel.

16. The communication device of claim 15, wherein the access grant is generated when the demodulator is engaged in a demodulation of an already received message.

17. The communication device of claim 15, wherein the a means for generating a grant of access to the reverse link traffic channel comprises:

a means for determining a time that the demodulator will be available;

a means for determining a time of transmission of a grant of access to the reverse link traffic channel based on the determined time of demodulator availability; and

a means for generating an access grant based on the received communication resource access request and on the determined time of transmission of the access grant.

18. The communication device of claim 17, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time that the demodulator will finish demodulating the received message.

19. The communication device of claim 17, wherein the means for generating a grant of access to the reverse link traffic channel further comprises a means for determining a time interval between the time that the demodulator will be available and the time that an access grant may be transmitted.

20. The communication device of claim 15, wherein the communication resource access request comprises a preamble and wherein the access request detector comprises a preamble detector capable of detecting the preamble.

21. The communication device of claim 15, wherein the access grant comprises an acknowledgment.

22. The method of claim 1, further comprising a step of determining an earliest time that a grant of access to the reverse link traffic channel can be conveyed to a mobile station and wherein transmitting comprises transmitting the grant of access to the mobile station at or after the determined earliest time.

23. The apparatus of claim 8, wherein the means for generating a grant of access to the communication channel comprises a means for determining an earliest time that a grant of

access to the reverse link traffic channel can be conveyed to a mobile station and wherein the apparatus further comprises a means for conveying the grant of access to the mobile station at or after the determined earliest time.

24. The communication device of claim 15, wherein the means for generating a grant of access to the communication channel comprises a means for determining an earliest time that a grant of access to the reverse link traffic channel can be conveyed to a mobile station and wherein the apparatus further comprises a means for conveying the grant of access to the mobile station at or after the determined earliest time.